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with DFI are Medicare-eligible, and hospitals are motivated to decrease costs without altering patient outcomes. A large, multicenter, randomized, double-blind trial (SIDESTEP) comparing ertapenem (1 g QD) and piperacillin/tazobactam (3.375 g QID) found equivalent efficacy in the treatment of DFI. **METHODS:** Individuals enrolled in SIDESTEP, treated entirely as inpatients, and clinically evaluable at final assessment (10 days after completing antibiotic therapy; n = 99) were included. Cost per dose was calculated from a) average actual hospital acquisition price/dose (IMS Health, National Sales Perspectives) for 2005 in U.S. dollars for ertapenem ($40.52) or piperacillin/tazobactam ($13.58); b) average U.S. wage and benefits for labor, based a review of 10 time-and-motion studies of intravenous antibiotic drug preparation and administration ($3.03); and c) consumable supplies, using a 40% discount off manufacturer list price in the 2005 Redbook ($2.52). For each patient, actual doses (either ertapenem or piperacillin/tazobactam) was multiplied by total cost per dose (ertapenem = $45.23; piperacillin/tazobactam = $19.13). **RESULTS:** No differences with respect to demographics, mean length of treatment or wound severity were noted (intravenous therapy days: ertapenem = 6.6; piperacillin/tazobactam = 6.4); (wound severity: ertapenem = 29%; piperacillin/tazobactam = 26% severe). Differences were significant with respect to mean doses of active drug (ertapenem = 7.6; piperacillin/tazobactam = 25.7; $p < 0.0001$) and costs (ertapenem = $352.11; piperacillin/tazobactam = $491.20; $p = 0.018$). The $139.10 difference between groups accounts for approximately 3% of total hospital DRG reimbursements for Medicare patients. **CONCLUSIONS:** Once-daily dosing of ertapenem offers the advantage of less cost to hospitals, compared to QID dosing for piperacillin/tazobactam, without compromising efficacy or safety.

PIN3

THE COST OF TREATING RIBAVIRIN-INDUCED ANEMIA IN HEPATITIS C: THE IMPACT OF USING RECOMBINANT HUMAN ERYTHROPOETIN

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OBJECTIVES: Ribavirin-induced anemia is a common adverse effect of chronic hepatitis C treatment. Pilot studies have shown that the use of epoetin has decreased the need for ribavirin dose reduction or discontinuation. Our goal was to calculate the incremental cost-effectiveness of using epoetin to treat ribavirin-induced anemia, per ribavirin dose reduction or discontinuation averted. Our secondary aim was to calculate the incremental cost of hepatitis C treatment, comparing those who developed anemia to those who did not, using each of two strategies: ribavirin dose reduction/discontinuation or epoetin. **METHODS:** Using estimates from the literature and decision-analytic techniques, we modeled treatment patterns and estimated the cost of managing ribavirin-induced anemia. One-way sensitivity analyses were used to address uncertainty. **RESULTS:** Clinically significant anemia, defined as a 2 g/dL or greater reduction in hemoglobin, developed in approximately 72% of patients in observational studies. The cost-effectiveness of using epoetin to treat ribavirin-induced anemia ranged from $39,579 (severe anemia, genotype-2/3) to $52,200 (moderate anemia, genotype-1), per ribavirin dose reduction/discontinuation averted. The incremental cost of treating hepatitis C, comparing patients with anemia to those without, using ribavirin dose reduction/discontinuation saved $2742 (genotype-1) and $323 (genotype-2/3); when using epoetin; the additional cost was $2075 and $5501, for genotype-1 and genotype-2/3 patients, respectively. **CONCLUSIONS:** The incremental cost of treating ribavirin—induced anemia is minimal, and varies with the probability of developing anemia. However, once anemia has developed, the cost of using epoetin per ribavirin dose modification averted is substantial; and varies with the probability of response to epoetin. These findings suggest that additional studies are warranted that will define both genotype-specific strategies to treat ribavirin-induced anemia and the optimal use of epoeitin as adjunctive therapy in patients with chronic hepatitis C.

PIN4

ECONOMIC ANALYSIS OF LATENT TUBERCULOSIS INFECTION (LTBI) SCREENING IN MILITARY RECRUITS: QUANTIFERON®-TB GOLD IN-TUBE (QFT-GIT) VERSUS TUBERCULIN SKIN TESTING (TST)

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OBJECTIVES: Military recruits undergo screening for LTBI at accession with TST. The low specificity of TST results in false positives and unnecessary LTBI treatment. A highly specific whole blood assay for the diagnosis of LTBI exists (QFT—GIT, Cellestis) pending FDA approval. Unlike TST, administration of QFT-GIT at application to military service is feasible and would permit exclusion of LTBI positives. We investigated the potential cost savings of implementing universal application QFT-GIT testing with or without confirmatory accession QFT-GIT testing and treatment, to determine whether QFT-GIT testing costs are offset by reduced LTBI treatment costs. **METHODS:** A decision tree was constructed to model the direct costs of TST testing and LTBI treatment of accessions versus the costs of alternative policies of QFT-GIT applicant testing with or without confirmatory accession QFT-GIT testing and treatment. Average LTBI treatment costs per positive test were expressed as a ratio to the cost of QFT-GIT testing (treatment: cost ratio). Costs of administering and reading a TST were assumed to be zero, and QFT-GIT costs were normalized per accession. **RESULTS:** Applicant QFT-GIT testing was economical over TST above a treatment: cost ratio of 52:1, while confirmatory QFT-GIT testing was economical over TST above a treatment:cost ratio of 108:1. In two-way sensitivity analysis, threshold ratios decreased with increasing LTBI prevalence and increasing probability of accession and were relatively insensitive to uncertainty in test characteristics. **CONCLUSIONS:** Application QFT-GIT results in fewer LTBI positive accessions and should be implemented if cost-beneficial. Quantification of the direct costs of LTBI treatment are needed to determine the maximum cost of QFT-GIT testing to economically implement this policy, and whether improved sensitivity can be economically achieved with confirmatory QFT-GIT testing.

PIN5

COST EFFECTIVENESS OF ADDING 7-VALENT PNEUMOCOCCAL CONJUGATE VACCINE TO A CHILDHOOD VACCINATION—IMPACT OF HERD IMMUNITY

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OBJECTIVES: Streptococcus pneumoniae is a leading bacterial cause of septicaemia, meningitis, pneumonia and otitis media and may cause severe sequelae or death. A 7-valent conjugate pneumococcal vaccine (Prevenar) has proved effective in preventing otitis and invasive pneumococcal disease (IPD) in children. A reduction in IPD has also been observed in some adult age groups, possibly due to herd immunity. The aim of this study was to explore the cost-effectiveness of vaccination of infants in Norway. **METHODS:** The study was based on a Markov-model